

ABSTRACT OF THE DISCLOSURE

Before executing a speech recognition, a composite acoustic model adapted to noise is generated by composition of a noise adaptive representative acoustic model generated by noise-adaptation of each representative acoustic model and difference models stored in advance in a storing section, respectively. Then, the noise and speaker adaptive acoustic model is generated by executing speaker-adaptation to the composite acoustic model with the feature vector series of uttered speech. The renewal difference model is generated by the difference between the noise and speaker adaptive acoustic model and the noise adaptive representative acoustic model, to replace the difference model stored in the storing section therewith. The speech recognition is performed by comparing the feature vector series of the uttered speech to be recognized with the composite acoustic model adapted to noise and speaker generated by the composition of the noise adaptive representative acoustic model and the renewal difference model.